Mercury and the Clean Air Mercury Rule (CAMR)

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Despite its attractive, silvery appearance, the metal mercury, along with its compounds, is well known for its toxic nature. Concentrations of mercury in its various forms in the air are usually low and are of little direct concern.

In Kansas, for example, a relatively high concentration would be 50 pounds deposited over a square mile in a year, which translates to approximately one-half teaspoon of the liquid metal per acre per year. But as mercury falls to earth through rain, snow, and dry deposition, some of it enters lakes, rivers, estuaries, and ocean waters. Once there, it can transform into methylmercury, a very toxic, bioaccumulative organic compound that builds up in fish tissue—and can then end up being eaten by humans, either directly (in a fish sandwich, say) or indirectly (in the form of fish meal fed to poultry, for example).

In March, EPA issued the first-ever federal rule to reduce mercury emissions from coal-fired power plants, named the Clean Air Mercury Rule (CAMR). CAMR is based on a two-phase “cap and trade” approach, which avoids making every plant install expensive pollution controls at the same time. Under CAMR, states are given two target “annual mercury budgets,” or caps, one for 2010 and one for 2018. Starting from a nationwide total estimate of 48 tons of mercury emitted for the 1999 baseline year, the 2010 cap represents a 20 percent reduction (to 38 tons per year), and the 2018 cap represents a 70 percent reduction (to 15 tons per year) for all sources.

CAMR sets the caps for each state in proportion to reported coal-fired generating capacity of units in the state, with all states totaling 38 tons (for 2010) or 15 tons (for 2018). The Kansas cap for 2010 is 0.723 ton, and for 2018 is 0.285 ton of mercury. In turn, each participating state is to distribute its allocation of mercury “allowances” to the coal-fired power plants within its boundary, based on the method it finds most equitable, reserving some allowances for future construction. Starting in 2010, CAMR would permit owners who have installed mercury-reducing controls and are emitting less than their allocation of allowances, to sell their leftover allowances as credits to those who are still emitting mercury beyond their allocation.

Despite its efforts to promote CAMR’s market-based approach and goal of 70 percent mercury reduction by 2018, EPA has been sued by several environmental organizations and by at least 15 states, who claim CAMR does not do enough to curb the dispersion of this toxic substance. The two largest issues that have unfolded in the lawsuits have been: (1) whether current technology can actually eliminate mercury better (such as 90 percent removal) in a shorter period of time, thus requiring a change in the rule’s requirements; and (2) whether EPA is not following its guiding law, the Clean Air Act, by allowing mercury from coal-fired power plants to be made exempt from the stringent, technology-based “maximum available control technology” (MACT) standards normally reserved for air toxics.

No matter which side eventually loses in these lawsuits, the American public can feel confident we all will, sooner or later in any case, be winners in seeing significant decreases in the amount of mercury in our environment. A copy of CAMR is available on its web page at: http://www.epa.gov/air/mercuryrule/index.htm.